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Does the Loss of Homestead Fish Ponds in Bangladesh Increase Food and Nutrition Insecurity of Poor Consumers?

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Abstract

Fish is a vital component of food and nutrition security in Bangladesh. With the decline in capture fisheries, small scale aquaculture with home based fish ponds has been for a long time food safety net for the poor. Although producing small quantities, only for own consumption availability of fish made the poor less vulnerable to fluctuations in fish supply and prices. However, recently government has been discouraging home based small scale fish farming and promoted commercial fish farming instead. This paper analyses the transition from home based fish ponds to commercial aquaculture. Using two waves of panel data covering five major geographical hubs in Bangladesh, a double-hurdle model is estimated to examine the commercial transformation of non-commercial fish farmers and its implication for livelihood and household food and nutrition security. A correlated random effect procedure with a control function approach is used to control for unobserved heterogeneity and potential endogeneity of explanatory variables. Our results reveal that households are characterised with moderate degree of market participation. The average share of sold fish is 47 % of their total fish production with an increase of 19 % sold overtime. Market participation increases household income and generates a positive impact on their welfare. Almost 44 % of the farmers are subsistence farmers, whereas transitory and commercial farmers constituted 33 % and 23 % respectively. Overall, 50 % of the farmers change their degree of commercialisation over time and become more market oriented. The actual production depends highly on carp species with lower nutritional quality than small indigenous species, which are rich in micronutrients. Besides, commercialisation process of smallholders involved new risks with substantial transition challenges associated with price declines, production failures and investment risks. Therefore, smallholders need to receive positive support to face these challenges of commercialisation process for ensuring food and nutrition security at the household level.

Keywords: Aquaculture, Bangladesh, commercialisation, developing countries, food security, smallholders

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